Miami International Airport Benchmarks

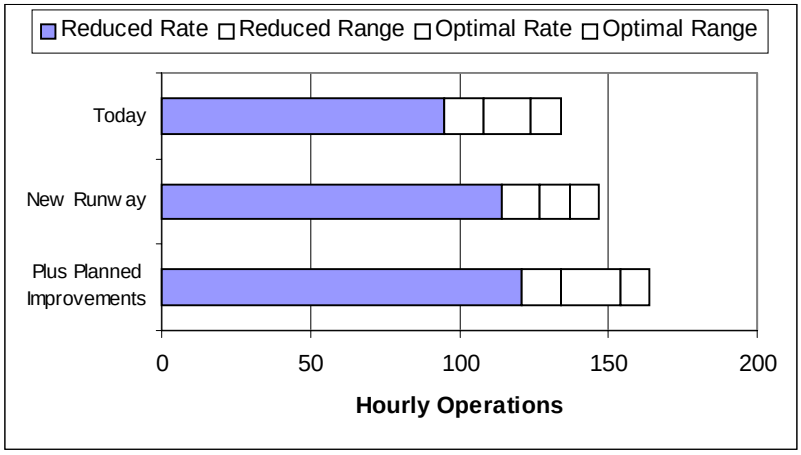
- The current capacity benchmark at Miami is 124-134 flights per hour in good weather.
- Current capacity falls to 95-108 flights (or fewer) per hour in adverse weather conditions, which may include poor visibility, unfavorable winds or heavy precipitation.
- In 2000, about 1% of flights at Miami experienced significant levels of delay (more than 15 minutes).
- In good weather, Miami's scheduled traffic rarely exceeds capacity.
- In adverse weather, scheduled traffic occasionally exceeds capacity (one hour per day).
- During adverse weather, capacity is lower and results in more delays.
- A new runway, scheduled for completion in 2003, is expected to improve Miami's capacity by 10% (to 137-147 flights per hour) in good weather and by 20% (to 114-127 flights per hour) in adverse weather.
- Technology and procedural improvements, in addition to a new runway are expected to improve Miami's capacity benchmark by a total of 24% (to 154-164 flights per hour) over the next 10 years, while the adverse weather capacity benchmark will increase by a total of 27% (121-134 flights per hour).
- These capacity increases could be brought about as a result of:
  - ADS-B/CDTI (with LAAS), which provides a cockpit display of the location of other aircraft and will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes, which allow a more consistent flow of aircraft to the runway.
- Demand at Miami is expected to grow by 23% over the next decade, indicating that delays are expected to remain about the same.

MIA – Miami International Airport

Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **Optimum Rate** – Visual Approaches (VAPS), unlimited ceiling and visibility
- **Reduced Rate** – Most commonly used instrument configuration, below visual approach minima

Scenario	Optimum Rate	Reduced Rate
Today	**124-134**	**95-108**
New Runway	**137-147**	**114-127**
Plus planned improvements	**154-164**	**121-134**



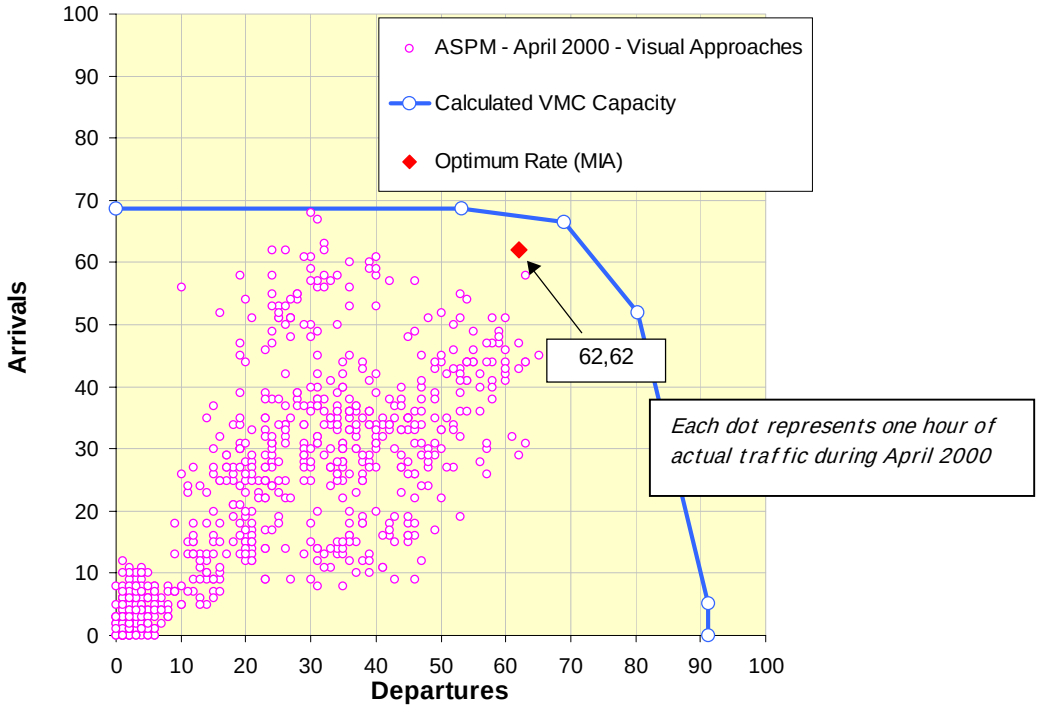
- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
  - ADS-B/CDTI (with LAAS) – provides a cockpit display of the location of other aircraft. This will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes – allows more consistent delivery of aircraft to the runway threshold.
- Benefits from Planned Improvements assume that all required infrastructure and regulatory approvals will be in place. This includes aircraft equipage, airspace design, environmental reviews, frequencies, training, etc. as needed.
- **Note:** These benchmarks do not consider any limitation on airport traffic flow that may be caused by non-runway constraints at the airport or elsewhere in the NAS. Such constraints may include:
  - Taxiway and gate congestion, runway crossings, slot controls, construction activity
  - Terminal airspace, especially limited departure headings
  - Traffic flow restrictions caused by en route miles-in-trail restrictions, weather or congestion problems at other airports

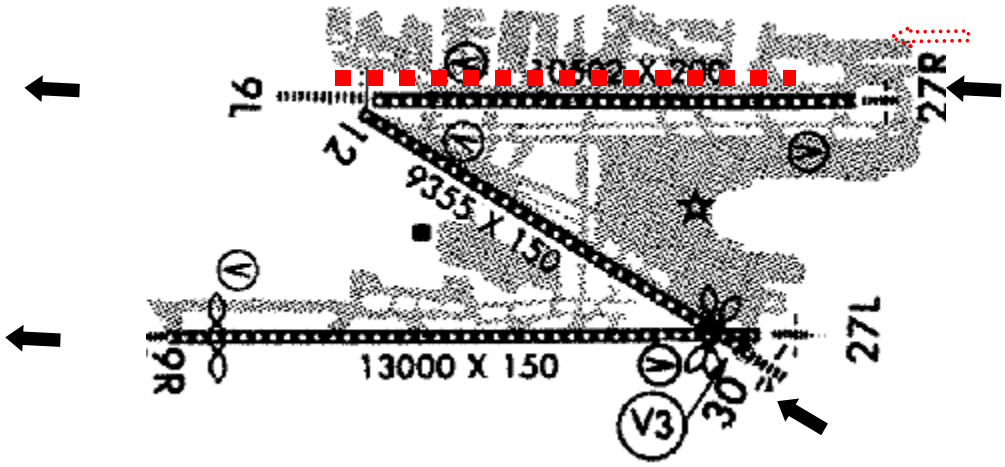
These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.

The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

Current Operations – Optimum Rate

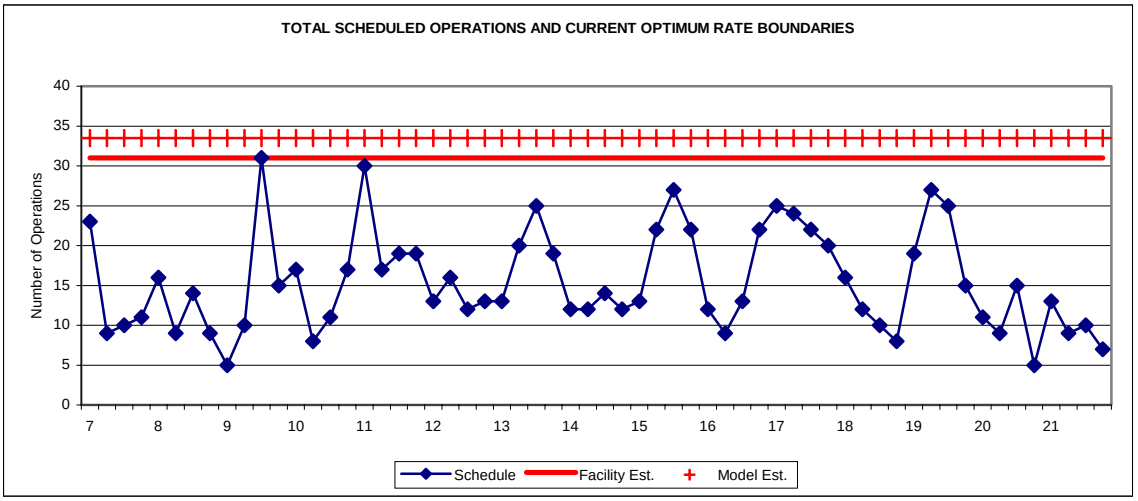
- Visual approaches, visual separation – Optimum Rate of Optimum Rate:
  - Arrive: 27R, 30 Arrive: 62
  - Depart: 27R, 27L Depart: 63
- ASPM data are actual hourly traffic counts for the month of April 2000 for Visual Approach conditions. These data include other runway configurations and off-peak periods.
- Solid line represents the airport capacity during a busy hour calculated by the FAA Airport Capacity Model, showing the tradeoff between arrival and departure rates
- The capacity model can only approximate the operations at MIA

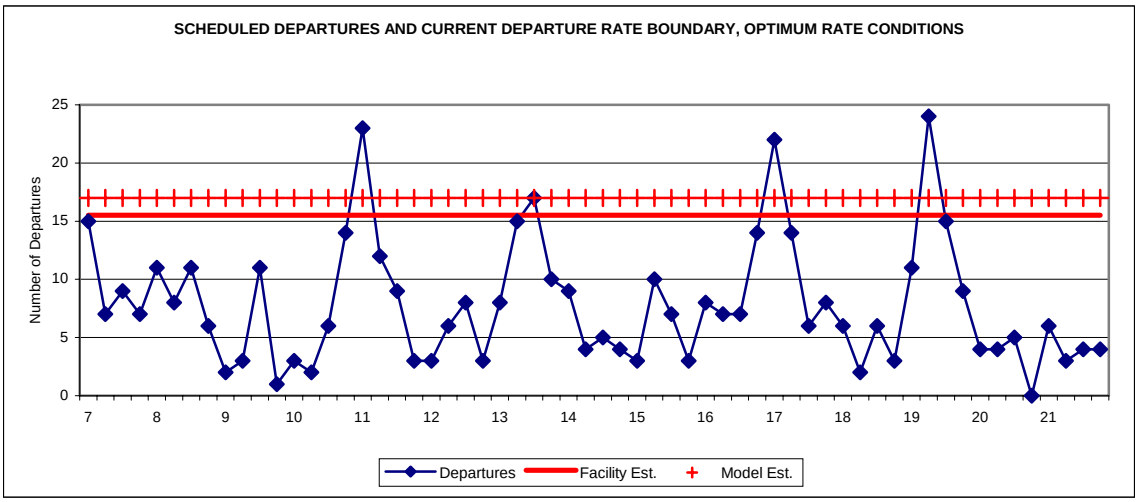


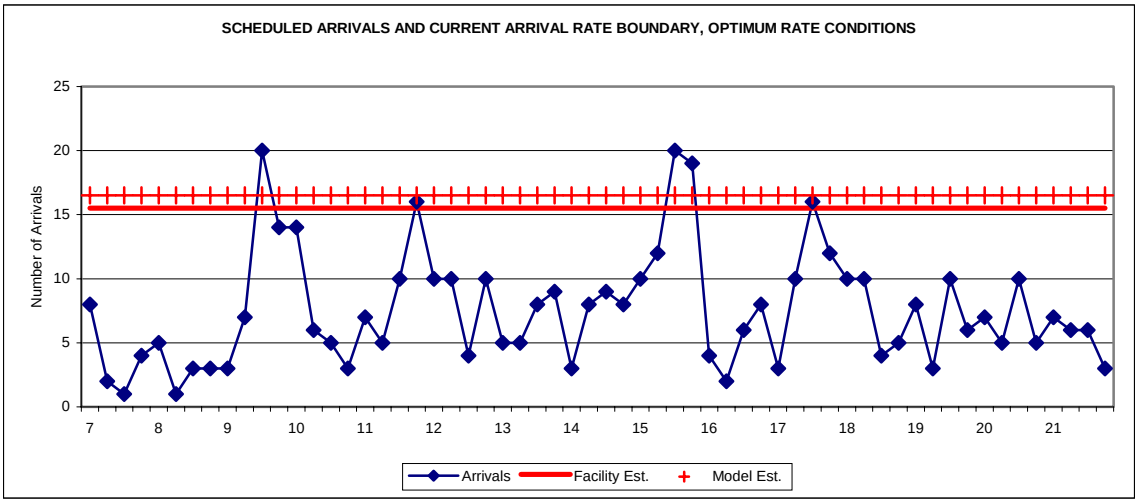


MIA – Miami International Airport

Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions



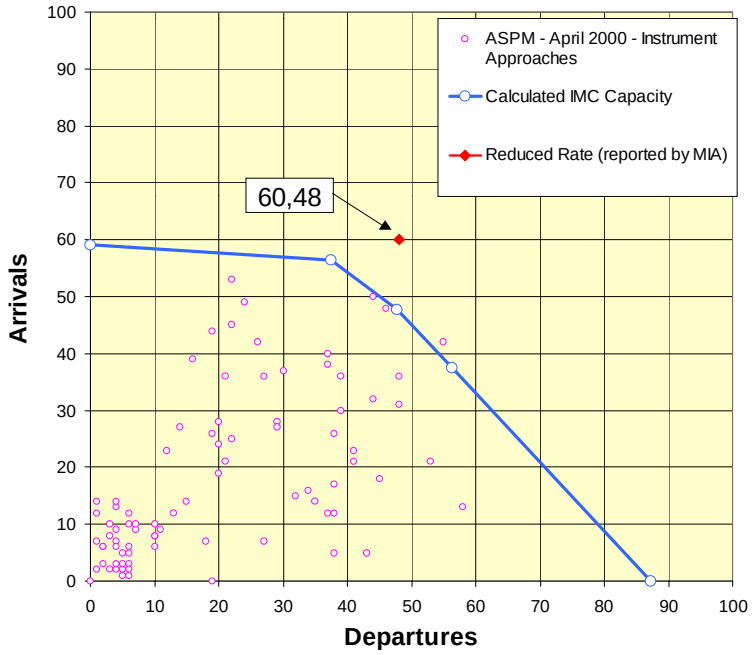


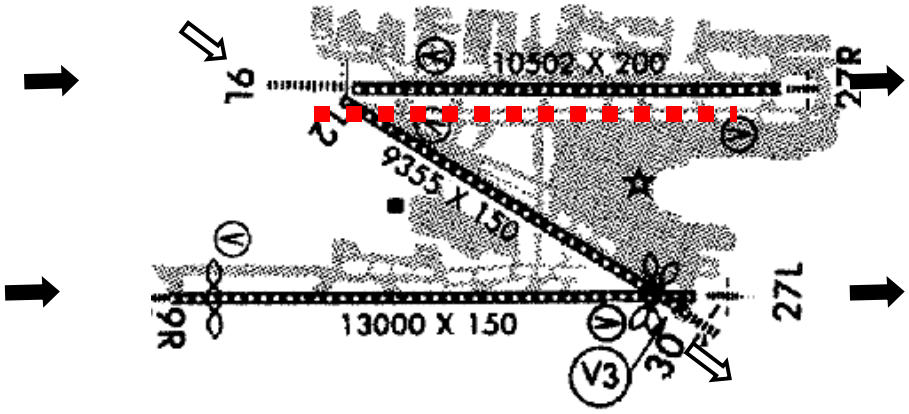


Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima)
  - Arrive: 9L, 9R, 12* Arrive: 60 (48)
  - Depart: 9L, 9R, 12 Depart: 48
  - The Departure Rate is reduced because currently MIA cannot conduct Arrival/Departure LAHSO (Runways 9R & 12).
- ASPM data for “Instrument Approaches” can include marginal VFR, with higher acceptance rates
- Chart below represents observed traffic and expected rates in terms of operations per hour

**During IFR Conditions Runway 12 not available for arrivals, reducing the arrival rate to 48.*





MIA – Miami International Airport

Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions